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February, 1932.

Agricultural engineering.

Engineering the farms: Editorial. Oregon Farmer. v.53, no.27. December 31, 1931. p.4. Extract from Secretary Hyde's report.

Mechanics and agriculture--Partners. By E.D. Dunning. Better Farm Equipment and Methods. v.4, no.6. February, 1932. p.6-7. Agricultural engineering closely related to live stock raising and other farming activities.

To demonstrate farm planning. Better Farm Equipment and Methods. v.4, no.6. February, 1932. p.16. Agricultural engineers of the U. S. Department of Agriculture, cooperating with the University of Minnesota, are arranging a practical demonstration of the economies of rearranging farms through the use of power-driven machinery.

Agriculture.

Farm problems and proposed adjustments, economic and otherwise. Washington, State College Extension Service. Timely Economic Information for Washington Farmers. no.2. 1931. 8p.

Mechanization, management and competitive position of agriculture. By M.L. Wilson. Agricultural Engineering. v.13, no.1. January, 1932. p.3-5.

New England farm bureau and utility men unite to aid rural service. Electrical World. v.99, no.2. January 9, 1932. p.74.

Our dry land agriculture: Editorial. Montana Farmer. v.19, no.9. January 1, 1932. p.4. Steady progress has been made in water utilization.

Agriculture.

(Cont'd)

Present and future economic position of farmers. By
Arthur J. Perkins. 1931. 8p. Department
of Agriculture of South Australia. Bulletin No. 250.

Why some farms "pay" better than others. By T.S.
Thorfinnson. Better Farm Equipment and Methods.
v.4, no.5. January, 1932. p.6-7, 31. Quality
stock, well-planned field arrangement, definite crop
rotation and good equipment will not offset negligence.
Farm records helpful to management.

Air conditioning.

Air conditioning. By William Hull Strangle. Heating
and Ventilating. v.29, no.1. January 1932. p.54-57.
Part XV. Mechanical refrigeration. By R.W. Waterfill.

Air conditioning in a hot-water heated home. By E.J.
McCourt. Aerologist. v.7, no.1. January 1932.
p.5-8.

Code of air conditioning: Editorial. Aerologist. v.7,
no.1. January 1932. p.22, 46. Discussion of
new code about to be issued by American Society of Heating
and Ventilating Engineers.

Humidification for residences. By A. P. Kratz.
Domestic Engineering. v.138. no.1. January 9, 1932.
p.34-37, 121.

Use of gas for house cooling and summer air conditioning.
By Eugene D. Milener. Ice and Refrigeration.
v.81, no.5. November 1931. p.285-290.
Conditions to be met; Description of units in use.

Associations.

Civil engineers meeting at New York well attended.
Engineering News Record staff report. Engineering News
Record. v.108, no.4. p.136-140. January 28, 1932.

Forty-fifth convention of the Association of Land-Grant
Colleges and Universities. Experiment Station
Record. v.66, no.1. January 1932. p.1-5.

Building construction.

Bibliography of acoustics of buildings. By F.R. Watson.
National Research Council. Reprint and Circular no. 99.
1931. 14-43p. Reprinted from Journal of the
Acoustical Society of America. July 1931.

Construction revival is essential to prosperity. By Sanford
E. Thompson. Engineering News Record. v.108, no.4.
January 28, 1932. p.134-135. Industrial and
business activity is shown to depend on building. Reduction
of construction costs and study of new building needs and
their economic value are proposed as most direct means for
restoring normal business.

Effect of reduced population growth on construction demand.
By Thomas S. Holden. Architectural Record. v.71,
no.1. January 1932. p.3-8. Building demand
of the future will be carefully created on the basis of
community planning and community cooperation.

Facts and figures of current construction progress.
Engineering News Record. v.108, no.5. February 4, 1932.
p.159-162. Volumes and costs show considerable
decrease. Materials production lower, with some drop in prices.
Labor wages affected by unemployment. Budgets and estimates
indicate further loss for present year.

Sub-drainage system for a public building. By R.M. Starbuck.
Domestic Engineering. v.138, no.1. January 9, 1932.
p.26-28.

Tests of laminated bent rafters. By Henry Giese and E.D.
Anderson. Agricultural Engineering. v.13, no.1.
January 1932. p.11-13.

Concrete.

Concrete in architecture. Portland Cement Association.
1927. 59p.

Corn borer.

Preliminary report upon the infestation and general status of
the European corn borer in western New York. By H. N.
Bartley and L. B. Scott. U. S. Department of Agriculture.
Circular no. 197. 1931. 22p.

Conduits.

Formula for economic gradients for conduits. By Raymond A. Hill. Engineering News Record. v.108, no.3. January 21, 1932. p.25. Factors of present worth of loss in head, capital cost and relation of cost to size are combined.

Corrosion.

Corrosion prevention. By Lessiter C. Milburn. S.A.E. Journal. v.29, no.2. August 1931. p.148-157. Protective paints and greases; chemical and electro-chemical coatings; corrosion tests; heat treatment; Alclad steel.

Cotton.

Cotton production and distribution: Season of 1930-31. 1931. 74p. U.S. Bureau of the Census. Bulletin no.168.

Determination of sample size for diameter measurements in cotton fiber studies. By O.A.Pope. Journal of Agricultural Research. v.43, no.11. December 1, 1931. p.957-984. Intimate relationship exists between fiber diameter dimensions and spinning and manufacturing value of cotton.

Dams.

Dams--high, large and unusual. Part I--United States. By P.I.Taylor. Reclamation Era. v.23, no.2. February 1932. p.28-32.

Depressed apron checks erosion below Hamilton Dam. By C.H.Eiffert. Engineering News Record. v.108, no.4. January 28, 1932. p.130-132. Flexible mat on riverbed proves unsatisfactory. Energy dissipation now accomplished in pool over depressed apron.

Erosion below Conowingo Dam proves value of model tests. By L.N.Reeve. Engineering News Record. v.108, no.4. January 28, 1932. p.127-130. Design based on results of tests made in Worcester laboratory found effective in minimizing erosion and in insuring that it occurs only at a safe distance below dam.

Dams.

(Cont'd)

New form of dam proposed for narrow rock canyons. By C. H. Howell. Engineering News Record. v.108, no.6. February 11, 1932. p.214-216. Thrust-buttress type, developed for Mexican site requiring high dam, is proof against overturning, sliding, and uplift effects and is 40 to 60 per cent smaller than gravity structure.

New type of dam. Letter from A. C. Janni. Engineering News Record. v.108, no.2. January 14, 1932. p.71. Frame of this structure consists of pylons and arches; water-face is formed by slabs. Pylons, or cantilevers, extend down to solid rock. Archers are supported by pylons and by intermediate posts. Arches abut against solid rock properly prepared to receive them. Two systems of beams, one horizontal and other vertical, run in each panel formed by two consecutive rings and two consecutive pylons. Against these beams, slabs are set with calked joints; so that these slabs are independent of each other; they are held in place by stirrups projecting from beams.

Stability of dams increased by more economical use of materials. By Calvin V. Davis. Engineering News Record. v.108, no.6. February 11, 1932. p.210-214. Progressive changes from solid gravity dam to buttress type show increasing stability with decrease of indeterminate factors.

Drainage.

Federal loans proposed to levee and drainage districts. Engineering News Record. v.108, no.2. January 14, 1932. p.74.

Land drainage in Minnesota. Letter from E. V. Willard. Engineering News Record. v.108, no.3. p.107. Discussion of article "Land drainage in Minnesota faces financial failure".

Mold drainage. By H.W. Kerr. Australian Sugar Journal. v.23, no.9. December 3, 1931. p.473-474. Description of implement adapted from Killefer Subsoil Knifer.

Dredging.

Maintaining river channels by shoal dredging. By J.J. Sullivan. Engineering News Record. v.108, no.2. January 14, 1932. p.50-53. Location and occurrence of shoals. Mobilizing for dredging. Parallel cut system employed. Dustpan suction head preferred.

Electricity on the farm.

All the comforts of home for 3 cents an hour. By Dean W. Taylor. Electrical World. v.99, no.3. January 16, 1932. p.152-154.

Comfort and economy in home electric plants. By. E.T. Leavitt. Farm Implement News. v.53, no.2. January 14, 1932. p.22-23.

Capturing the early market: How electricity will help the market gardener. Rural Electrification and Electro-Farming. v.7, no.80. January, 1932. p.238-240.

Dairy farm electric power costs. By M.D. Butler. Hoard's Dairyman. v.76, no.24. December 25, 1931. p.838.

Electric motors and their care. Farm Implement News. v.53, no.2. January 14, 1932. p.21, 25.

Electric plowing. Rural Electrification and Electro-Farming. v.7, no.80. January, 1932. p.235-236. Electric ploughing is still in its infancy in almost all parts of the world. Experiences here described deal with the experimental work of a Scottish farmer who, with an improvised plough, has demonstrated its value.

Electric plowing gains in popularity abroad. Electrical World. v.90, no.4. January 23, 1932. p.194.

Have rates come down? By E. R. Moachan. Electricity on the Farm v.5, no.1. January 1932. p.8-12. The man who uses all of the electric energy it is practical for him to use has already brought his own rate down and is taking the most effective possible step to reduce rates for his neighbors.

Homemade light plant. Farmer. v.49, no.45. December 12, 1931. p.C. Ordinary water pumping type of windmill propeller and tower attached to rear axle of Model T. ford. Drive shaft of rear end is coupled to armature shaft of auto generator.

Locating light fixtures in farm buildings. By H. S. Hinrichs. Electricity on the farm-merchandising supplement. v.5, no.1. January 1932. p.s11-s12.

Electricity on the Farm.

(Cont'd)

Progress for rural electrification: New England wide program of unity and co-ordination. New England Homestead. v.104, no.2. January 9, 1932. p.3, 6.

Radio acts as hired man in Middle West. Electrical World. v.99, no.1. January 2, 1932. p.4. Tests made of radio-controlled plow.

Silo-filling by electric power is profitable. By Fred J. Bullock. Northwest Farm Equipment Journal. v.46, no.1. January 1932. p.63-64.

Simple farm wiring. By K.J.T. Ekblaw. New England Homestead. v.103, no.23. December 5, 1931. p.5-7.

Treatment of plant life by intensive illumination. By R. Borlase Matthews. Rural Electrification and Electro-Farming. v.7, no.79. December 1931. p.215-217.

Ultraviolet light in agriculture. By Geo. W. Kable. Electricity on the Farm. v.5, no.1. January 1932. p.21-25, 39.

Ultra-violet ray treatment for farm stock. By R. Borlase Matthews. Rural Electrification and Electro-Farming. v.7, no.80. January 1932. p.249-250.

Wiring the house for convenience. By Morgan G. Farrell. American Home. v.7, no.1. October 1931. p.21, 51-53.

Erosion.

Controlling small gullies by bluegrass sod. By R.E. Uhland. U. S. Department of Agriculture Leaflet no.82. 1931 4p.

Where the soil thief tells a story: Erosion records are the evidence on Harrison County farm. By Garner Young. Missouri Ruralist. v.73, no.12. December 15, 1931. p.6.

Evaporation.

Evaporation from free water surfaces. By Carl Rohwer. 1931. 96p. U. S. Department of Agriculture Technical bulletin no. 271.

Extension.

County agent maintenance: Editorial. Wisconsin
Agriculturist and Farmer. v.59, no.1.
January 9, 1932. p.4.

Vocational agricultural makes contribution. By H.L.
Gantz. Farm and Ranch. v.50, no.42.
October 17, 1931. p.2, 15. Evening class
instruction for farmers is enabling them to analyze
their own problems and make use of scientific resources.

Farm buildings.

Distinctive features of pig farming in pig farming in
Scandinavia. By W. A. Stewart. Journal of the
Ministry of Agriculture. v.38, no.7. October 1931.
p.689-702. Detailed drawings of houses.

Farm housing in Ohio. By C. E. Lively. Ohio.
Agricultural Experiment Station. Bimonthly Bulletin no.
154. Jan.- Feb., 1932. p.28-29. Results of brief
housing surveys.

Landscaping for farm homes. By Amy Kelly. Extension
Service Review. v.3, no.1. January 1932. p.7.

Low-cost cobblestone buildings. Extension Service
Review. v.3, no.1. January 1932. p.4.
In addition to low cost, this type of construction
offers ease of building, no necessity for paint on
outside walls, fire resistance, and fairly permanent
structure.

When we plan to build. By Ivan D. Wood. Successful
Farming. v.30, no.2. February 1932. p.7, 78-79.
Good farm building may pay indirectly in the following
way: 1. By saving hay and grain from spoiling; 2. Shel-
tering stock, machinery, and supplies; 3. Increasing
production by providing comfortable quarters; 4. Saving
labor. 5. Increasing interest and satisfaction of owner.

Farm machinery and equipment.

Agricultural machines and farm progress. By E.T. Leavitt.
Better Farm Equipment and Methods. v.4, no.6.
February 1932. p.8-9, 31. Modern implements
multiply individual capacity and insure timeliness of
farming operations. Three phases in the development of
power farming: 1. Building of power unit itself.
2. Development of machinery suited to unit required.
3. Proper application of power and machinery to varying
farm conditions.

Farm machinery and equipment.

(Cont'd)

All trade branches join university faculty in Implement Conference: Agricultural Machinery progress and experimental development of year reported by State College staff. Implement Record. v.29, no.1. January 1932. p.19. Hay harvesting costs analyzed.

Appleton two-row push-type corn picker. Farm Implement News. v.53, no.3. January 21, 1932. p.21. In operation of Appleton two-row picker, snapping rolls, which are of special design, pinch off ears instead of pulling them loose, insuring a clean job of snapping. Ears then drop into a conveyor which delivers them to husking rolls. These rolls are very similar to those used in the Appleton husker and shredder, universally known for the quality of its work. Ears are kept in line after they reach rolls and are prevented from running down the rolls too fast by a steel slat self-adjustable traveling apron. This apron also exerts slight pressure; just enough to bring ears into proper contact with husking rolls, insuring cleanest kind of husking. Husked ears fall into hopper of a wagon box elevator which delivers them to wagon drawn behind tractor.

Artificial drying of hay. By Roy Bainer. Implement Record. v.29, no.2. February 1932. p.22-23. Vitamin content; types of dryers; operation of Ardrier; hot gases advance hay; moisture evaporation.

"Auto" patent self-anchoring winch. Implement and Machinery Review. v.57, no.681. January 1, 1932. p.898-899. Winding drum is situated at front of chassis, rope passing underneath tractor and then between rope guide rollers at rear. In operation, rope is paid out while tractor is travelling forward to take up position, and when rope is completely paid out, winding gear is engaged. As load becomes apparent, anchor gradually inserts itself into ground and tractor is therefore held until load arrives to desired position. Travelling gear is then engaged, and as tractor is driven forward, anchor automatically comes out of ground and trails until winding is begun again.

Caring for farm machinery. By C.V. Englund. Better Farm Equipment and Methods. v.4, no.6. February 1932. p.12, 14. Proper housing, proper adjustment of machinery while in operation, regular lubrication of wearing parts, regular and systematic inspection, sharpening of cutting edges.

Farm Machinery and equipment.

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Facts about farm machine prices. By Finley P. Mount.
Farm Implement News. v.53, no.4. January 28, 1932.
p.18-21.

Farm machinery in the Dakotas: "Machine Age" characterized
by increase in tractors, trucks, autos. Compiled by
O.M. Fuller. Dakota Farmer. v.52, no.1.
January 9, 1932. p.3.

Farm machines for 1932. By J. Bownlee Davidson.
Successful Farming. v.30, no.2. February 1932.
p.12, 44-45. Progress in development will be more
rapid in the future than in the past.

Future of the farm equipment business. By Alexander
Leggo. Farm Implement News. v.53, no.3.
January 21, 1932. p.14-15, 23.

German implement industry and trade. Farm Implement News.
v.53, no.4. January 28, 1932. p.7.

Grinding grain for livestock. Results of experiments shown
in tests at Wisconsin station. Wisconsin Agriculturist
and Farmer. v.59, no.1. January 9, 1932. p.3.

Harvesting peas with the combine. By Hobart Boresford.
Implement Record. v.29, no.2. February 1932.
p.19-20.

Hay chopping. By Ben D. Moses. Implement Record.
v.29, no.1. January 1932. p.28-31.
Summarization of modern practice and tendencies in
cutting, grinding and blowing of feed.

Howard cane harvester. Australian Sugar Journal.
v.23, no.9. December 3, 1931. p.507. Cane is
cut by two revolving discs equipped with self-sharpening
devices, and butts of cut cane are then gripped firmly
between two serrated edge gathering-chains and carried
rearward at a fast speed on to table of machine, thus
pulling cane down to horizontal position, ready to enter
spring rollers on the table, butt-first. Moment gathering-
chains catch hold of butt of cane, it is drawn in--no matter
of what shape cane may be. Cane then enters two sets of
revolving steel wire brushes, which strip the dirt and trash
from stalk, at same time forcing cane down on rearward table
conveyor, until head is clear of wire brushes. Meanwhile,
it is being carried crosswise by another set of slatted con-
veyors working from top of table which permits on-coming

Farm machinery and equipment. (Cont'd)

Howard cane harvester. (Cont'd)

cane to enter machine. Cut cane then comes on to second table conveyor with forward brushes, which brings stalks forward in such manner that heads come in contact with baffle-plate so placed in relation to set of revolving knives, that immature tops are severed from ripe, millable cane. Top is cut into small pieces, and by means of blower mounted on back of machine supplying blast of air to point near topping knife, trash and dirt is blown on to ground in readiness for plowing into soil. Cane which is now in condition to send to mill, may be dropped to ground in small heaps, or elevated on to loading carrier attached to side of machine. Loader holds about two tons, and when filled to capacity cane is chained and deposited on the field.

Implements and machinery at the Smithfield show. Implement and Machinery Review. v.57, no.681. January 1, 1932. p.900-907.

Machinery can cut costs. By E.R. Goss. New Jersey Agriculture. v.14, no.2. February 1932. p.6-7. Plant setting machines; cuts losses of grain.

Machines have stolen our jobs! Radio talk by Merle Thorpe. 1932. 5p. mimeographed.

Making hay without the sunshine. Scientific American. v.145, no.5. November 1931. p.352-353.

Ardryer. Hay first delivered to cutter. Chopped hay is fed from cutter to revolving cylinder, seven feet in diameter and 20 feet long. At one end of drum is oil furnace and hay and hot air are drawn through cylinder or dryer, by an exhaust fan located at outlet end. Dried hay is then delivered to collector from which it is fed to blower and blown directly into mow in barn.

New conditions face farm equipment industries. Can branch factories offset restriction on export trade imposed by new tariffs? How will leading industries fare on basis of domestic business? By Henry Richmond, Jr. Magazine of Wall Street. v.49, no.4. December 12, 1931. p.214-215, 229, 233.

New Idea transplanter. Implement and Machinery Review. v.57, no.681. January 1, 1932. p.891-892.

Farm Machinery and equipment. (Cont'd)

New machines to meet a new era. By E.T. Leavitt.
Implement and Tractor Trade Journal. v.47, no.3.
January 30, 1932. p.7, 15. Improvements
born of depression will enable farmers to face chang-
ing economic order with more assurance to profit. Farm
costs of production must be lowered.

Power corn binder makes small-crow filling practicable.
Farm Implement News. v.53, no.5. February 4,
1932. p.23. Can operate in high gear in
any field in which tractors can run. One man on
tractor can operate both it and corn binder with either
its power carrier or alternative wagon loader and wagon
hitch. Cuts up 10 acres a day.

Profits from power: Low costs mean less than a good job
at the right time. By R.U. Blasingame. Farm Journal.
v.56, no.2. February 1932. p.20-21.

Report on trials with a transplanting machine. By Cornelius
Davies and G.R.B. Smyth - Homewood. South-Eastern
Agricultural College (University of London). Wye. Kent.
Department of Engineering. 1931. 8p.

Rotary hoe: A tool for every farmer. By E.R. Durgin.
American Thresherman. v.35, no.1. January 1932. p.4-5.
Can be used in many crops; increases yield while reducing
cost; no trouble to operate; made in both horse and tractor
drawn sizes.

Servicing power farming equipment: Tools that dealers are
using with profit in their shops and kinds of work handled
with each type. By Frank W. Squire. Farm Implement
News. v.53, no.5. February 4, 1932. p.20-22.
Electric drill; stands for electric drills; chain hoist;
bench grinders; refacing valves; bench lathes; reboring
and finishing machines; screw and arbor presses; small tools.

Ueber das Borrichten der Pflugschare. Von W.F. Schirmer.
Deutsche Landwirt. v.51, no.2. January 16, 1932.
p.24-25. Proper sharpening of plow shares.

Fertilizer spreaders.

Manure spreader insures efficient use of valuable fertilizer.
By E. H. Hunger. Better Farm Equipment and Methods
v. 4, no.5. Jan. 1932. p.8-9.

Fertilizers.

Analysis of commercial fertilizers, fertilizer supplies and home mixtures for 1931. N.J. Agricultural Experiment Station Bulletin 533. 1931. 39p.

Care of farm manures. Extension Division News. Virginia Agricultural and Mechanical College. v.14, no.4. February 1932. p.6. If we are careful to preserve and apply home produced fertilizer wisely, we will not only be able to get on with less fertilizer, but will get more from those we do buy.

Garden fertilizers. By H.R. Cox. 1931. N.J. Agricultural Experiment Station. Extension bulletin no.92. 8p.

Muscle Shoals rededicated to fertilizer and power production. Electrical World. v.90, no.4. January 23, 1932. p.184-188.

N-P-K in new forms. By J. Sidney Cates. Country Gentleman. v.101, no.10. October 1931. p.12-13,34. Postwar developments in fertilizer chemistry.

Flood control.

Mississippi river work ahead of schedule. By Brig. Gen. T.H. Jackson. Engineering News Record. v.108, no.5. February 4, 1932. p.178-179. More than 209 million yards placed in levees in $3\frac{1}{2}$ years. 1931 output of 93.9 million yards beats record. Channel regulation by permeable dikes and bank revetment undertaken on large scale. Less than half of main-river levee yardage remains to be placed.

Heating.

Comparison of intermittent and continuous firing. By Arthur H. Sennor. Fuel Oil Journal. v.10, no.8. February 1932. p.16-17, 90-91.

Fire protection association report on gas heating. Heating and Ventilating v.29, no.1. January 1932. p.30. Part of report of National Fire Protection Association dealing with flueways and chimneys, draft hoods or regulator installation, burners.

Heating.

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Heating and ventilating as practiced in Central Europe.

By Konrad Meier. Heating and Ventilating.

v.29, no.1. January 1932. p.31-34.

Heating in residences and small structures. Pt. VII.

By H.L. Alt. Domestic Engineering. v.138, no.1.

January 9, 1932. p.31-33, 116-119.

Steam heating systems.

Heating with refrigerating machines and diesel engines.

By P.A. Willis. Heating and Ventilating. v.29,

no.1. January 1932. p.52-53. Not suitable

for individual residence heating.

Oil heat in a small central plant. By Thomas R. Shaver.

Domestic Engineering. v.138, no.1. January 9,

1932. p.55-59, 70.

Pointers on combustion in domestic systems of heating.

By L. W. Millis. Domestic Engineering. v.138, no.1.

January 9, 1932. p.64-70.

Hotbeds.

Apparatus for growing plants under controlled environmental conditions.

By Robert A. Steinberg.

Journal of Agricultural Research. v.43, no.12.

December 15, 1931. p.1071-1084.

Electrical heating for hotbeds. Electricity on the

farm. Merchandising Supplement. v.5, no.1.

January 1932. p. s5-s10.

Fire heated hotbed. By C.W. Stroman. 1932. 8p.

Mimeographed. South Carolina Clemson Agricultural

College. Extension Service Agricultural Engineering

Information Circular no. 14.

Houses.

Beyond the city limits yet equipped with city conveniences.

By Arthur Bates Lincoln. American Home. v.7, no.1.

October 1931. p.16, 65.

Dimensions. By A. Lawrence Kocher and Albert Frey.

Pt.1. Kitchens. Architectural Record. v.71, no.1.

January 1932. p.49-53.

Farm and village home landscaping. A selected bibliography. Compiled by Josiah C. Folson.

President's

conference on Home Building and Home Ownership. Committee

on Farm and Village Housing, Washington, D.C. 1931. 14 p.

mimeographed.

Houses. (Cont'd)

Findings and suggestions of the Housing Conference.

By Michael A. Mikkelsen. Architectural Record.
v.71, no.1. January 1932. p.39-43.

House frame entirely arc welded. By A.F. Davis.

Sheet Metal Worker. v.23, no.1. January 8, 1932.
p.6-7, 10. General description of materials and
methods used.

Housing in tourist camps: A bibliography compiled by
Josiah C. Folsom. President's conference on
Home Building and Home Ownership. Committee on Farm
and Village Housing. Washington, D.C., 1931. 23 p.
Mimeographed.

Housing of migratory agricultural laborers: A biblio-
graphy compiled by Josiah C. Folsom. President's
Conference on Home Building and Home Ownership. Commit-
tee on Farm and Village Housing. Washington, D.C.
1931. 21p. Mimeographed.

Housing standards. Housing v.20, no.4. December 1931.
p.280-304. Design and construction; community;
planning and planting; furnishings and decoration; home-
making; financing the home; home information centers,
reconditioning of houses.

Individual service in house planning. By Walter G. Ward.
Agricultural Engineering. v.13, no.1. January 1932.
p.6.

Objectives of housing. Housing. v.20, no.4. December
1931. p.267-279. Design and construction;
community; planning and planting; furnishings and
decoration; home making; ownership, rental, income,
taxation; home information centers; reconditioning of
homes.

President's conference on home building and home ownership.
Results and object. By Dr. Ray Lyman Wilbur.
Commercial Standards Monthly. v.8, no.7. January 1932.
p.195-198.

Steel-frame houses with poured light-weight concrete walls.
Engineering News Record. v.108, no.3. January 21,
1932. p.87.

Income, Farm

Business recovery will be slow: Farm markets are expected to be first to show improvement. By Gilbert Gusler. Nebraska Farmer. v.74, no.1. January 9, 1932. p.3, 18. Rigidity in the costs of processing and distributing farm products has forced the farmer to bear the brunt of the decline in the amount consumers would pay.

Gross farm income. Farm Implement News. v.53, no.1. January 7, 1932. p.30. Bureau of Agricultural Economics figures. Estimated at \$6,920,000,000.

Insulation.

Insulation in house cooling: Editorial. Heating and Ventilating. v.28, no.12. December 1931. p.35-36.

Irrigation.

Canal-bank maintenance by disking on Imperial Irrigation District. By M.J. Dowd. Engineering News Record. v.108, no.6. February 11, 1932. p.206-207. Tractor-drawn disk supplants hand-cutting of brush and bamboo on 2600 miles of ditch. Cost cut in half and results more effective. Unit completes 25 miles per month.

Canal construction by Bureau of Reclamation. Reclamation Era. v.23, no.1. January 1932. p.7-9. Vale main canal, Milner-Gooding canal, Yakima-Kittitas canals, Fort Laramie canal, Interstate canal, Boise Main South and Mora canals, Owyhee Main canals, All-American canal.

Factors influencing the establishment of irrigated pastures in Northern Colorado. By Herbert C. Hanson. Colorado Agricultural Experiment Station. Bulletin 378. 1931 53p.

Irrigation on the Plains. By T.C. Richardson. Farm and Ranch. v.50, no.51. December 19-26, 1931. p.10.

Liability of an irrigation district for crop damage because of seepage. Reclamation Era. v.23, no.1. January 1932. p.6.

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Head backs federal development of Columbia river.

Electrical World. v.99, no.5. January 30, 1932.
p.209. Feasibility of project depends upon demand
for power and ability of power market to absorb power
within reasonable period after completion of dam and on
negotiation of contracts for this power before construc-
tion begins. Much will depend on attitude of states and
municipalities toward enterprise. Project a combination
of power and irrigation.

Head plan for irrigation district relief is opposed.

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districts amounting to one year's fees at 6 per cent
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v.23, no.1. January 1932. p.4.

New device saves water. By H.C. Burgess. Washington
Farmer. v.66, no.4. January 28, 1932. p.7.
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three feet in diameter fitting around base of tree with
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an octagon shaped sprinkler which is adjustable for
throwing water more to one side or at different diameters
which would be valuable on hill sides.

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Arizona Agricultural Experiment Station. Technical
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was given.

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tion equipment.

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Water resources investigations; Irrigation districts; Sec-
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tific Instruments. v.2, no. 12. December 1931.
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Implement Journal. v.37, no.1. January 1932.
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Making and cleaning ponds and water holes with explosives. By L. C. LeBron. Explosives Engineer. v.10, no.1. January 1932. p.21, 23.

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- Insulation and cold store doors: Details to observe in the annual overhaul. Cold Storage. v.34, no.404. November 19, 1931. p.325-326.
- Mechanical refrigeration in transport: Successful adaptation to motor haulage. Cold Storage. v.34, no.403. October 15, 1931. p.290-291.
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- Refrigeration progress reviewed: Industrial, commercial, and domestic developments. Cold Storage. v.34, no.404. November 19, 1931. p.328-330.
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Roof tiling. By Charles G. Dobson. London. Crosby Lockwood and Son, 1931. 147p. Short history of the craft, outline of modern English method of manufacture and of modern practice, some hints on choice of tile and on writing of specifications for roof tiling, and explanation of methods of measurement of roof tiling.

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Cleaning machines for large air-drying sewage beds. By L. P. Kane and Langdon Pearse. Engineering News Record. v.108, no.3. January 21, 1932. p.82-85. Equipment developed for the Sanitary District of Chicago consists of fork-like pick-up apron with elevating buckets. One machine strips the whole width of bed and another shuttles transversely.

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Concrete trench silo. By W.H. McPheeters. Country Gentleman. v.101, no.10. October 1931. p.22. New method of concreting which lowers cost.

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Arizona shows the way. By H.F. Kenyon. California Cultivator. v.77, no.26. December 26, 1931. p.584. Problems of soil fertility of arid districts.

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Effect of various temperatures on the storage and ripening of tomatoes. By R. C. Wright, W. T. Pentzer, T.M. Whitman and D. H. Rose. 1931. 35p. U. S. Department of Agriculture. Technical bulletin 268.

New type of storage house. Rural New Yorker. v.91, no.5195. p.52. January 16, 1932.

Potato storage on 259 farms in New York. By A.L. Wilson and E. V. Hardenburg. 1931. 58 p. Cornell University Agricultural Experiment Station. Bulletin 526.

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New uses for sugar. British Sugar Beet Review. v.5, no.5. January 1932. p.100. After certain treatment, would be suitable for commercial production of boots, shoes, adhesive textiles, lenses, photographic films, artificial leather, cartons, wrapping sheets, roofing tiles, paints, varnishes, decorative articles, filaments, threads and artificial rubber.

Some figures on the cost of producing sugar beets in Colorado. By Thos. H. Summers. Through the Leaves. v.20, no.1. January 1932. p.15-17. Profits are made only through proper attention to crop at right time and as result of well planned crop rotation.

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Sugar cane.

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1930 1931. 27p. U.S. Bureau of Labor
Statistics Bulletin no. 547.

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Are wheel-type tractors injurious to tilth?: Editorial.
Implement and Machinery Review. v.57, no. 681.
January 1, 1932. p.884.

He prefers tenants who have tractors. By J.E. Johnson.
Farm Implement News. v.53, no.5. February 4, 1932.
p.28-29. They are more likely to make success of
farming; More likely to make profits for land owners;
More stable and remain on one farm longer.

"Jimson" tractor wheel. Implement and Machinery Review.
v.57, no. 681. January 1, 1932. p.897. Consists
of special rim, which may be used either in conjunction
with existing hub and spokes, or alternatively, it can
be supplied as complete wheel with special hub and
spokes incorporated.

New electric tractor. Implement and Machinery Review.
v.57, no.681. January 1, 1932. p.889-890.
Tractor is fed by cable, which is connected to a low
tension line run out from farm buildings to one side
of field. Above two rolls, which run in alignment
there is mounted a drum on which electric cable coils and
uncoils automatically as tractor moves backwards and for-
wards. As tractor moves off from headland on which low
tension power line is placed, cable unwinds itself to re-
quired length, and lies on ground without there being
any trailing or other friction movement, and on return
bout recoiling takes place just as simply, with even
coiling on drum being assured.

Winter tractor uses. By Research Department, National
Association Farm Equipment Manufacturers. Farm Imple-
ment News. v.53, no.3. January 21, 1932. p.20.

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Fan selection. By Charles A. Carpenter. Heating and Ventilating. v.29, no.1. January 1932. p.37-39. Fan engineering is based on rather simple theories and mathematical analysis, enabling engineers to use ordinary common sense to make proper purchase. Every effort should be made to remove the air of mystery and to exercise sound judgment.

Mechanics of ventilating. By Konrad Meier. Aerologist. v.8, no.2. February 1932. p.5-8, 46.

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Boron in irrigation waters. By Carl S. Scofield and L.V. Wilcox. 1931. 66p. U.S. Department of Agriculture Technical Bulletin no. 264.

Ground and surface water rights cleared by decision. By Thos. H. Means. Engineering News Record. v.108, no.4. January 28, 1932. p.126. Editorial, p.116. Arizona Supreme Court holds that groundwearer supplies cannot claim appropriation rights unless existence of underground streams is clearly proved.

Making water measurements with current meters. By Sigmund J. Bitterli. Power. v.75, no.3. January 19, 1932. p.102-104. Current meters are used extensively in Europe for measuring flow of water to hydro-plants. Resume of some of current meter work that is being done in Europe.

New equation of state for water vapor. Mechanical Engineering. v.54, no.2. February 1932. p.142-144.

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Water supply, Rural.

Profits from running water. By E. T. Leavitt. Farm
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Windmills and electric power generation. Rural Electrifi-
cation and Electro-Farming. v.7, no.80. January
1932. p.246-248.

Wood.

Effect of chemical treatment on wood permeability. By Alfred
J. Stamm. Industrial and engineering chemistry.
v.24, no.1. January 1932. p.51-53. Specimens
of Douglas fir.

